

# Methods and systems for running multiple operating systems in a single mobile device

## Abstract

Methods and systems for running multiple operating systems in a single embedded or mobile device (include PDA, cellular phone and other devices) are disclosed. The invention allows a mobile device that normally can only run a single operating system to run another operating system while preserving the state and data of the original operating system. Guest OS is packaged into special format recognizable by the host OS that still can be executed in place by the system. The Methods include: ·Change the memory protection bits for the original OS; ·Fake a reduced physical memory space for guest OS; ·Use special memory device driver to claim memories of host OS; ·Backup whole image of the current OS and data to external memory card.